

**Translation**

**PATENT COOPERATION TREATY**

**PCT**

**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**  
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>LD 40064 LK</b>	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. <b>PCT/EP2004/051232</b>	International filing date (day/month/year) <b>24.06.2004</b>	Priority date (day/month/year) <b>27.06.2003</b>
International Patent Classification (IPC) or national classification and IPC		
Applicant <b>LOHMANN &amp; STOLTERFOHT GMBH</b>		

1.	This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2.	This REPORT consists of a total of <b>4</b> sheets, including this cover sheet.
3.	This report is also accompanied by ANNEXES, comprising: <ul style="list-style-type: none"> <li>a. <input type="checkbox"/> (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows:             <ul style="list-style-type: none"> <li><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</li> <li><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</li> </ul> </li> <li>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</li> </ul>
4.	This report contains indications relating to the following items: <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Box No. I Basis of the report</li> <li><input type="checkbox"/> Box No. II Priority</li> <li><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</li> <li><input type="checkbox"/> Box No. IV Lack of unity of invention</li> <li><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</li> <li><input type="checkbox"/> Box No. VI Certain documents cited</li> <li><input type="checkbox"/> Box No. VII Certain defects in the international application</li> <li><input type="checkbox"/> Box No. VIII Certain observations on the international application</li> </ul>

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/051232

## Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This report is based on translations from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of:

- ☐ international search (Rule 12.3 and 23.1(b))  
☐ publication of the international application (Rule 12.4)  
☐ international preliminary examination (Rule 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

☐ the international application as originally filed/furnished

☒ the description:

pages 1-7 as originally filed/furnished

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

☒ the claims:

nos. 1-8 as originally filed/furnished

nos.\* \_\_\_\_\_ as amended (together with any statement) under Article 19

nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

☒ the drawings:

sheets 1/1 as originally filed/furnished

sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages \_\_\_\_\_

☐ the claims, nos. \_\_\_\_\_

☐ the drawings, sheets/figs \_\_\_\_\_

☐ the sequence listing (*specify*): \_\_\_\_\_

☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

☐ the description, pages \_\_\_\_\_

☐ the claims, nos. \_\_\_\_\_

☐ the drawings, sheets/figs \_\_\_\_\_

☐ the sequence listing (*specify*): \_\_\_\_\_

☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/051232

**Box No. V** Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

## 1. Statement

Novelty (N)	Claims	3, 4, 8	YES
	Claims	1, 2, 5-7	NO
Inventive step (IS)	Claims		YES
	Claims	1-8	NO
Industrial applicability (IA)	Claims	1-8	YES
	Claims		NO

## 2. Citations and explanations (Rule 70.7)

This report makes reference to the following documents:

D1: EP-A-1 072 814 (POCLAIN HYDRAULICS IND), 31  
January 2001 (2001-01-31)

D2: DE 198 57 962 A (ZAHNRADFABRIK FRIEDRICHSHAFEN),  
21 June 2000 (2000-06-21)

D3: US-A-4 823 636 (LALLIER JEAN-CLAUDE), 9 February  
1988 (1988-02-09)

D4: EP-A-1 167 140 (LOHMANN & STOLTERFONT GMBH), 2  
January 2002 (2002-01-02)

Document D1 is considered to constitute the prior art closest to the subject matter of claim 1 and discloses (the references in parentheses are to that document):

a brake arrangement (figures 1) with a disk assembly (100) which comprises a plurality of outer disks (104) and corresponding inner disks (102) which can be compressed by a piston arrangement (108) to ensure braking, a first hydraulic circuit (124) acting upon the piston arrangement (108) to ensure service braking and a second hydraulic circuit (120) acting upon the piston arrangement (108) to ensure parking braking,

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the piston arrangement (108) comprising a service brake piston (114) which is in contact with the disk assembly (100), is impinged upon by the first hydraulic circuit (124), and in turn can be impinged upon by a separate, adjacent parking brake piston (116) which interacts with the second hydraulic circuit (120).

Consequently, all the technical features of claim 1 are known from a single document.

Moreover, the features of claims 2, 5 and 6 are also known from the same document (figure 1; features 118, 138).

Claims 1 and 7 are known from D2 (figure 1; column 3, lines 23-67).

The subject matter of claims 1, 2 and 5-7 is therefore not novel (PCT Article 33(2)).

The arrangement of the parking brake piston on the outer circumference of the service brake piston, as defined in claim 3, relates to a measure which appears to lie within the scope of what a person skilled in this field routinely makes, on the basis of familiar considerations.

The same is true of claims 4 and 8, which relate to conventional, generally known measures in the field of disk brake technology.

Claims 3, 4 and 8 therefore cannot make an inventive contribution to the subject matter of claims 1, 2 and 5-7 (PCT Article 33(3)).